entering, MVPD markets as cable operators.

103. Thus, an examination of LEC activity since the *1994 Report* makes it clear that the state of LEC entry into the MVPD marketplace is continuing to evolve, both in terms of the mode and timing of entry. The pace of technological change may affect the speed of LEC entry into the MVPD marketplace, irrespective of which mode of entry the LEC chooses. Both U S West and Bell Atlantic cited the need to further evaluate new technologies as a reason for asking the Commission to suspend review of certain Section 214 applications.[269] GTE and Bell Atlantic acknowledge in their comments a reluctance to commit to a technology that may become obsolete in the near future.[270] Moreover, as was the case in 1994, unresolved issues remain that affect the ability of LECs to offer delivered video programming:[271] (1) the Commission's regulatory framework for VDT is still developing; telecommunications reform legislation is still pending before Congress;[272] and (2) the Supreme Court is expected to decide the constitutionality of the statutory cable-telco cross-ownership ban sometime next year.[273]

E. Satellite Master Antenna Television Systems

104. SMATV systems are MVPDs that serve residential, multiple dwelling units ("MDUs"), and various other buildings and complexes. A SMATV system generally offers the same type of programming as a cable system, and the operation of a SMATV system largely resembles that of a cable system -- one or more satellite dishes and antennas receive the programming signals; equipment combines, amplifies and processes the signals; and wires distribute the programming to individual dwelling units. By statute, however, a SMATV system is defined by way of an exception to the definition of a cable system.[274] A system is a cable system if "closed transmission paths" (i.e., wires) are used: (1) to serve buildings that are not commonly owned, controlled, or managed, or (2) to cross a public right-of-way. To qualify as a SMATV system, and not be subject to cable system regulation, neither of the two statutorily defined operational elements for a cable system may exist within the system.[275]

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[269] *See supra* notes 240, 249.

[270] GTE Comments at 9-10; Bell Atlantic Comments at 13-14.

[271] *1994 Report*, 9 FCC Rcd at 7504-05 ¶ 120.

[272] *See* H.R. 1555, 104th Cong., 1st Sess. § 201 (1995); S. 652, 104th Cong., 1st Sess. § 202 (1995).

[273] *United States v. Chesapeake & Potomac Tel. Co.*, No. 94-1893 (filed Jun. 26, 1995).

[274] Communications Act § 602(7), 47 U.S.C. § 522(7).

[275] *See Implementation of Sections 11 & 13 of the 1992 Cable Act (Horizontal & Vertical*
(continued...)

105. A typical SMATV system is an unfranchised, stand alone system that serves a single building or complex, or a small number of buildings or complexes in relatively close proximity to each other. For this reason, SMATV systems are sometimes referred to as "private cable systems." Recently, SMATV operators have begun using 18 GHz microwave facilities to link MDUs that are separately owned or separated by public rights-of-way.[276] By using microwave equipment instead of coaxial cable to link their facilities, SMATV operators avoid being regulated as cable operators. This permits them to realize efficiencies associated with using some of the same headend equipment to serve more subscribers.

106. Relying upon industry sources, the *1994 Report* concluded that there were approximately 3000 to 4000 SMATV systems operating nationwide, and approximately one million SMATV subscribers as of August 15, 1994.[277] Recently, however, some industry sources have reassessed estimates of SMATV subscribership over the past few years and concluded that the estimates should be revised downward. Thus, rather than the estimated one million subscribers in 1994, and 1.09 million this year,[278] the current estimates are 850,000 SMATV subscribers in 1994, and 950,000 in 1995.[279] Both sets of estimates, however, indicate continued SMATV subscriber growth.

107. One analyst representing the industry suggests that particular markets, such as those in Dallas, Texas, Phoenix, Arizona and Florida, are experiencing SMATV system growth, and that this growth has spurred interest by firms such as General Electric Capital, Videotron, and MCI in investing in the SMATV market.[280] SMATV system growth may also be due in part to the fact that SMATV operators may be able to deliver video programming

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[275](...continued)
Ownership Limits, Cross-Ownership Limitations and Anti-Trafficking Provisions), Memorandum Opinion & Order on Reconsideration of the First Report & Order, MM Docket No. 92-264, 10 FCC Rcd 4654, 4659 ¶ 12 (1995) (*"SMATV-Cable Cross-Ownership Recon."*).

[276] *See Amendment of Part 94 of the Commission's Rules to Permit Private Video Distribution Systems of Video Entertainment Access to the 18 GHz Band*, Report & Order, PR Docket No. 90-5, 6 FCC Rcd 1270 (1991).

[277] *1994 Report*, 9 FCC Rcd at 7488-89 ¶ 92.

[278] Paul Kagan Associates, Inc., *Marketing New Media*, Cable World, Feb. 20, 1995. *See also* MPAA Comments at 6-7 (quoting Paul Kagan article); HBO Reply Comments at 2.

[279] Telephone conversation on October 19, 1995 between Commission staff and John Mansell, Senior Research Analyst with Paul Kagan Associates, Inc. *See also infra* Appendix G, Table 1.

[280] David Dea, *The Race is On!*, Private Cable & Wireless Cable, Aug. 1995, at 15-17.

for less cost than cable operators.[281] Liberty Cable, for example, states that its video services are attractive to subscribers because it does not charge for additional outlets and its services are offered at half the price charged by the incumbent cable operator.[282]

108. A few current examples of SMATV systems follow. Interactive Cable Systems, Inc. provides SMATV service to 700 properties, passes 230,000 households and serves 80,000 retail subscribers.[283] OpTel, Inc. ("OpTel") provides SMATV service to more than 350 properties, passes more than 110,000 households, and serves more than 50,000 subscribers in Los Angeles, San Diego, Houston, Phoenix and the Dallas-Ft. Worth metropolitan areas.[284] Liberty Cable serves approximately 28,000 subscribers at approximately 150 sites in the New York metropolitan area.[285] Cable Plus has approximately 140 SMATV systems in the western United States, passing about 45,500 homes and serving about 18,000 retail subscribers.[286]

109. The Motion Picture Association of America, Inc. ("MPAA") states that the Commission's decision this year to permit cable operators to acquire SMATV systems within their existing service territories removed a significant barrier to entry into the SMATV business.[287] Commenters in that proceeding claimed that potential SMATV operators were hesitant to enter the SMATV business because they did not have the ability to recoup sunk costs by selling their SMATV systems to locally-franchised cable operators when that operator was the only potential buyer.[288] In eliminating the prohibition against cable operators buying SMATV systems operating in their existing franchise areas, the Commission noted that one of the benefits of this decision might be to provide an exit strategy for SMATV operators;

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[281] *See* Dea, *supra*, at 15-17.

[282] Liberty Cable Comments at 4-5.

[283] Paul Kagan Associates, Inc., *Leading SMATV Operators*, Private Cable Investor, Dec. 31, 1994, at 5. *See also infra* Appendix F.

[284] *Id.*

[285] Liberty Cable Comments at 2. Liberty Cable also states that it "provides service to a handful of MDUs located in Northern New Jersey." Liberty Cable Comments at 4 n.9. *See also Liberty Cable Co., Inc. v. City of New York*, 60 F.3d 961 (2nd Cir. 1995). Kagan estimated that Liberty Cable served approximately 175 properties and passed approximately 30,000 units in December 1994. *Infra* Appendix F.

[286] Paul Kagan Associates, Inc., *Leading SMATV Operators*, Private Cable Investor, Dec. 31, 1994, at 5. *See also infra* Appendix F.

[287] MPAA Comments at 6-7.

[288] *Id.* (footnote omitted).

however, the economic data supporting this contention was inconclusive.[289]

110. SMATV operators raise concerns about cable operators' use of exclusive contracts and certain zoning restrictions. Liberty Cable and OpTel argue that cable operators are abusing their market power by coercing MDU owners into perpetual exclusive contracts that foreclose competition from new market entrants.[290] WCAI argues that cable operators have begun to pre-wire residential units for cable service at no charge to the developer in exchange for deed covenants and other restrictions forever barring the homeowner from installing rooftop antennas.[291] These commenters urge Congress or the Commission to take action to curb these alleged abuses.

111. As for the future, SMATV operators, like other MVPDs, are looking to increase their channel capacity though digital technology.[292] At the same time, SMATV operators are trying to keep costs down by connecting systems through 18 GHz microwave facilities.[293] SMATV operators are also penetrating new markets such as colleges and universities.[294] In addition, SMATV operators are trying to differentiate themselves from cable operators by offering security services and intra-MDU communications (or private telephone) services together with multichannel video programming services.[295]

F. Broadcast Television Service

112. In assessing the competitive position of broadcast television, it is important to distinguish between broadcast television as a source of programming that is an input to cable service and broadcast television as a transmission medium. As a source of programming,

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[289] *SMATV-Cable Cross-Ownership Recon.*, 10 FCC Rcd at 4666 ¶ 31.

[290] Liberty Cable Comments at 22; OpTel Comments at 3; *see also* Bell Atlantic Comments at 11-12.

[291] WCAI Comments at 27-28.

[292] NCTA Comments at 20-21. *See also* C. Thomas Veilleux, Home Furnishings Newspaper (HFN), Mar. 20, 1995, at 2 (reporting that Thomson Consumer Electronics has announced that it is testing a version of the DSS system for use in MDUs).

[293] Paul Kagan Associates, *Resurgence to 18 Ghz Microwave Technology*, Private Cable Investor, Sept. 30, 1995, at 3-4.

[294] Paul Kagan Associates, Inc., *Private Cable Graduates To A New Campus*, Private Cable Investor, June 30, 1995, at 4.

[295] Telephone conversation on January 10, 1994 between Commission staff and Deborah Costlow, Esq., Winston & Strawn, who represents several SMATV and MMDS system operators.

broadcast television continues to be the most watched source of video programming. Between 1984 and 1994, the number of broadcast signals available to the public increased by 32%.[296] In the last year, the number of operating commercial and noncommercial television stations increased from 1,518 to 1,542.[297] In addition, two new networks, United Paramount's UPN and Warner Brothers' WB, commenced program distribution in the 1994-95 television season.

113. In the 1994-95 television season, the four major networks (i.e., ABC, CBS, Fox, and NBC) accounted for a combined 66% share of prime time viewing among all television households; UPN and WB achieved a combined 9% share of prime time viewing.[298] The most recent data available for households subscribing to cable service indicates that, even in cable homes, programming originated on local broadcast television stations accounted for a combined 64% share of all day viewing in the 1993-94 television season, while non-premium cable networks and pay cable services achieved a combined 45% share of all day viewing.[299] It appears that broadcast television service continues to satisfy the demand for video programming for a significant number of viewers. Indeed, the importance of broadcast television as a source of programming is reflected in the fact that the inability of certain distribution technologies (e.g., DBS) to carry local stations may affect their competitiveness.

114. Moreover, broadcasting continues to be a profitable business, as total advertising revenues reached $13.5 billion in the half of 1995.[300] Advertising revenues for the four major networks alone reached $6.2 billion in the first half of 1995, an increase of 3% over the first half of 1994.[301] In 1994, advertising revenues for the four major networks

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[296] R.R. Bowker, A Reed Ref. Pub. Co., *Broadcasting & Cable Yearbook 1994*, C-218. In 1984, there were 1,180 commercial and noncommercial television stations, and in 1994, there were 1,520. Federal Communications Commission, *Broadcast Station Totals as of September, 1984*, FCC News Release (Oct. 12, 1984). Federal Communications Commission, *Broadcast Stations Totals as of September 30, 1994*, FCC News Release (Oct. 12, 1994).

[297] Federal Comm. Comm'n, *Broadcast Station Totals as of August, 1995*, FCC News Release (Sept. 8, 1995).

[298] *People's Choice*, Broadcasting & Cable, Sept. 25, 1995, at 34. These figures are provided by Nielsen Media Research.

[299] National Cable Television Association, *Viewing Shares Broadcast Years 1983/84-1993/94*, Cable Television Developments, Spring 1995, at 5 (*citing* A.C. Nielsen Co. statistics). Reported audience shares exceed 100% due to multiple set viewing.

[300] Steve McClellan, *Broadcast TV Ads Top $13.5 Billion in 1st Half*, Broadcasting & Cable, Sept. 4, 1995, at 12. The Television Bureau of Advertising supplied this data, which is based on information gathered from the Competitive Media Reporting's MediaWatch Service.

[301] *Id.* This figure represents sales for ABC, CBS, Fox, and NBC.

reached approximately $10.9 billion, while cable programming networks received an estimated $2.3 billion in advertising revenues.[302]

115. On the other hand, as 96% of the nation's television households are currently passed by cable and basic cable subscribership continues to escalate,[303] the use of the broadcast spectrum as a transmission medium for direct video program delivery has clearly declined. Approximately two thirds of the nation's 95.9 million television households watch local broadcast channels through the facilities of an MVPD, and only one third of the households rely on over-the-air transmissions.[304] Accordingly, we continue to believe, as in the *1994 Report*, that broadcast television as a transmission medium is insufficient to constrain cable market power.[305]

116. Several recent developments and technological innovations have the potential to affect the constraining effect of broadcast television as a transmission medium on cable operator conduct. First, the Commission has undertaken a series of proceedings aimed at removing existing regulations that may restrain more efficient and effective use of broadcasting as a video programming and transmission medium, which may prevent a rational, more efficient organization of the broadcast industry.[306] Second, advances in broadcast technology, such as digital compression and advanced television, could permit multiple programs to be broadcast over a single channel, thereby expanding the number of broadcast

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[302] *See Trends in Advertising Volume,* A TVB Research Report (Television Bureau of Advertising), May 1995, at "U.S. Advertising Volume" (*citing* McCann-Erickson, Inc. statistics). McCann-Erickson's worldwide United States advertising figures represent all expenditures by advertisers -- national, local, private individuals, etc., advertising in the United States.

[303] Of the 91.6 million homes currently passed by cable, 59.7 million subscribed to basic cable services. *Supra* sec. II.A.

[304] *Infra* Appendix G, Table 1.

[305] *1994 Report*, 9 FCC Rcd at 7494 ¶ 101.

[306] *E.g., Review of the Prime Time Access Rule*, Report & Order, MM Docket No. 94-123, __ FCC Rcd __, FCC 95-314 (July 31, 1995), *summarized at* 60 Fed. Reg. 44773 (Aug. 29, 1995); *Review of the Syndication & Financial Interest Rules,* Report & Order, MM Docket No. 95-39, __ FCC Rcd __, FCC 95-382 (Sep. 6, 1995), *summarized at* 60 Fed. Reg. 48907 (Sep. 21, 1995); *Amendment of Part 73 of the Commission's Rules Concerning the Filing of Television Network Affiliation Contracts,* Notice of Proposed Rulemaking, MM Docket No. 95-40, 10 FCC Rcd 5677 (1995); *Review of the Commission's Regulations Governing Broadcast Television Advertising,* Notice of Proposed Rulemaking, MM Docket No. 95-90, __FCC Rcd __, FCC 95-226 (June 14, 1995), *summarized at* 60 Fed. Reg. 34959 (July 5, 1995); *Review of the Commission's Regulations Governing Television Broadcasting,* Further Notice of Proposed Rulemaking, MM Docket 91-221, 10 FCC Rcd 3524 (1995).

video signals available in a particular market and strengthening broadcast television as a competitor to cable. Advanced television could also provide a higher quality signal and improve reception in those areas where broadcast television is otherwise unavailable. Depending upon Commission regulatory approval, digital technology could allow each broadcast licensee to send several streams of video programming simultaneously, as well as a mixture of video and non-video services.[307] This technology could also enable the broadcaster to send a mixture of subscription and non-subscription services.[308] The spectrum needed for the transition to digital television could be obtained from the spectrum currently allocated to broadcasting.[309] In order to facilitate this transition, the Commission is considering the appropriate regulatory framework.[310] However, because advanced television is in its initial planning phase, it is premature to determine its competitive effect in the cable industry.

117. *Low Power Television.* In the *1994 Report*, the Commission noted that low power television ("LPTV") stations could offer multichannel video programming services on a subscription basis.[311] At that time, the Commission was aware of at least one LPTV station providing multichannel service in an uncabled rural area of Minnesota.[312] Construction permits were also issued to a single applicant for another possible LPTV site in Selma, Alabama.[313] On the other hand, the allocation of spectrum use for new LPTV stations was frozen for service within 100 miles of the thirty-six largest United States markets in order to preserve spectrum availability for the implementation of advanced television systems.[314] At

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[307] *See Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Fourth Further Notice of Proposed Rulemaking and Third Notice of Inquiry, MM Docket No. 87-268, __ FCC Rcd __, FCC 95-315 (Aug. 9, 1995), *summarized at* 60 Fed. Reg. 42130 (Aug. 15, 1995) ("*Fourth Advanced Television NPRM*").

[308] *Id.*

[309] *See Advanced Television Systems & Their Impact Upon the Existing Television Broadcast Service*, Tentative Decision & Further Notice of Inquiry, MM Docket No. 87-268, 3 FCC Rcd 6520 (1988).

[310] *Fourth Advanced Television NPRM*, __ FCC Rcd __, FCC 95-315.

[311] *1994 Report*, 9 FCC Rcd at 7507 ¶ 127. *See* also 47 C.F.R. § 73.642(a)(2).

[312] *1994 Report*, 9 FCC Rcd at 7508 ¶ 129.

[313] *Id.*

[314] *Notice of Limited Low Power Television/Television Translator Filing Window from April 1, 1994 through April 15, 1995*, Public Notice (MMB Mar. 3, 1994). We note that the application freeze placed on new LPTV stations within 100 miles of the thirty-six largest United States cities remains in effect.

present, we are unaware of any new LPTV stations providing multichannel services,[315] and thus, they do not seem to have a significant competitive impact on the market.

G. Other Actual and Potential Distributors

118. In this section, we address several other actual or potential distributors of video programming and distribution technologies that may affect competition.

1. Electric Utilities

119. Electric utility companies may be a potential source for the delivery of video programming.[316] The entry of electric utilities into the video programming market is currently limited by law.[317] However, if Section 205 of S. 652, the telecommunications bill passed by the Senate this year, is enacted as part of a new telecommunications law, the number of electric utilities permitted to provide video service could increase substantially.[318] That provision would permit registered public utility holding companies to diversify into telecommunications and other industries.

120. An electric utility could either provide video service either directly to consumers or serve as a "pipeline" by offering its facilities to video program providers. Such companies already have incurred substantial costs to deploy a network that reaches nearly every household in the country[319] and, according to one commenter, they have the financial resources and existing rights-of-way (e.g., pole attachments) needed to enter the video marketplace.[320] Most major utilities already have fiber optic lines for controlling power distribution, and need only additional coaxial cable or fiber to the home to offer competitive wideband telecommunications services.[321] Electric utilities have been experimenting with advanced communications technologies, including demand-side management programs that use

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[315] We note that Segue Services, a low power television engineering and consulting firm, is currently installing and testing equipment for a 17 channel LPTV system, which will provide subscription type service in Nebraska. *See Segue Installs LPTV System In Nebraska*, Private Cable & Wireless Cable, Aug. 1995, at 54.

[316] Electric utilities are defined as investor-owned utilities, municipal utility systems, and exempt public utility holding companies. *See* 15 U.S.C. § 79c.

[317] 15 U.S.C. § 79i.

[318] S. 652, 104th Cong., 1st Sess. § 205 (1995).

[319] *NOI*, 10 FCC Rcd at 7817 ¶ 62; MPAA Comments at 8.

[320] Next Level Communications Reply Comments at 10.

[321] *Utilities Eye Home Mkt.*, Electronic Buyers News, Feb. 27, 1995, at 20.

two-way communications with customers and fiber optic cable that can carry video programming.[322] As discussed above, some municipal electric utility companies are actively engaged in or contemplating overbuilding,[323] and have formed joint ventures with cable and telephone companies to provide video service.[324] Over the last year, additional plans have been announced by a few electric companies intending to enter the market for communications services.[325] As stated previously, there is some interest by electric utilities in the provision of video service, although there is no evidence of the extent of their potential entry at this time.

2. Video Cassette Recorders

121. Video cassette recorders ("VCRs") permit viewers to watch television programs at times other than their scheduled times, and allow viewers to view pre-recorded tapes. Approximately 85% of all homes own at least one VCR, about the same share of households as a year ago.[326] VCRs are used primarily for viewing pre-recorded video cassettes.[327] Although VCRs are not MVPDs, the Commission has recognized that VCRs have at least some effect on cable operator conduct. Previously, the Commission determined that VCRs are best considered competitors to premium and pay-per-view services provided by cable operators because both offer movies without commercial interruptions.[328] The price charged by video stores for movie rentals appears to have a constraining effect on the charge for pay-

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[322] MPAA Comments at 8-9. For example, Detroit Edison reportedly is planning to add telephone service and interactive video over the same equipment it intends to use for interactive control and monitoring of electricity in the home. *Utilities Eye Home Mkt.*, *supra*, at 20.

[323] *See supra* sec. II.A. *See also 1994 Report*, 9 FCC Rcd at 7508-09 ¶¶ 131-33.

[324] *See, e.g., Industry Giants Push Into Energy Management Market*, Comm. Daily, Feb. 28, 1995, at 8.

[325] *Utilities Eye Home Mkt., supra*, at 20; Daniel J. Murphy, *The Roadblocks to Competition, Deregulating Power Monopolies a Slow Process*, Investor's Bus. Daily, May 11, 1995, at 1.

[326] *1994 Report*, 9 FCC Rcd at 7510 ¶ 135; HBO Comments at 20. It is reported that there were approximately 115 million VCRs in use in 1994, an indication that many households have multiple VCRs. Warren Publishing, Inc., *Television & Cable Factbook* I-3 (1995).

[327] HBO Comments at 20.

[328] *See* Florence Setzer & Jonathan Levy, *Broadcast Television in a Multichannel Marketplace* 108 (Federal Communications Commission, Office of Plans and Policy, OPP Working Paper 26, June 1991).

per-view movies from cable operators.[329] According to industry analysts, consumers are willing to pay a premium for the convenience of pay-per-view service, but the differential between home video rental and pay-per-view prices cannot be too large.[330] The average pay-per-view movie cost $4.25 in 1994, somewhat higher than the average cost of renting a movie from a video store.[331] Currently, the average rental fee for all movies is $2.47 and the average for new movies, most comparable to the offerings of the pay-per-view services, is $2.70.[332]

122. Digital video discs ("DVDs") and digital VCRs are expected to be available by 1996. DVDs feature sharper digital pictures, a vast capacity for audio and data storage, and greater convenience and durability than videotape, although they cannot be used for home recording. Digital VCR tapes are expected to have more than two times the recording capacity of normal tapes. It is predicted that the availability of this technology will enhance competition as consumers will have access to programming not available over-the-air or through traditional cable service.[333] However, as with the introduction of conventional VCRs, these new home video technologies may not materially penetrate the market until their prices drop from the expected initial level of $1,000 to approximately $500.[334] On this basis, we expect that VCRs will continue to have some constraining effect for some consumers on the pay-per-view and premium movie services offered by cable systems, even though VCRs cannot provide the full range of services offered by cable systems generally.

3. Interactive Video and Data Services

123. The interactive video and data service ("IVDS") is a point-to-multipoint, multipoint-to-point, short distance communications service in which licensees may provide information, or services to individual subscribers at fixed locations within a service area, and subscribers may provide responses.[335] This radio based interactive service is available for a variety of public uses that may be delivered by, and coordinated with, broadcast television,

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[329] Veronis, Suhler & Assocs., *supra*, at 166-67.

[330] *Id.* at 166.

[331] *Id.* at 167.

[332] Video Software Dealers Association.

[333] HBO Comments at 21.

[334] Veronis, Suhler & Assocs., *supra*, at 181; Lawrence B. Johnson, *Videotapes's Best Years May Lie in the Future*, New York Times, Aug. 20, 1995, Section 2, at 21.

[335] 47 C.F.R. § 95.803(a).

cable television, MMDS, DBS, or any other future television delivery technology.[336] By itself, however, the service is not capable of delivering voice or full-motion video. Among the types of services that IVDS licensees may offer, in conjunction with video or data delivery systems, are polls, educational classes, home banking, and home shopping.[337] The Commission is also considering a proposal to allow IVDS licensees to provide ancillary mobile service to subscribers within their service area.[338]

124. The Commission awarded 18 IVDS licenses by a lottery held September 15, 1993. Pursuant to new radio spectrum auction authority, the Commission auctioned an additional 594 licenses on July 28 and 29, 1994.[339] Each license permits service within a specified service area, which is equivalent to a cellular radio service area. Under the rules, an IVDS licensee must make service available within one year to at least ten percent of the population or area that it is licensed to serve. This condition has been waived for 17 of the 18 firms awarded licenses through the lottery process, and the Commission is currently considering a request by a number of auction winners that the requirement be eliminated.[340] To date, only a few of the licensees have met the ten percent "build out" requirement. Thus, at this time, it appears that IVDS services are not available to sufficient numbers of consumers to affect the video marketplace.

4. Internet

125. The Internet is a world-wide network of computer networks operated by governmental, educational, and commercial entities, including entertainment firms. The interconnected computer networks use a common communications protocol, TCP/IP (Transmission Control Protocol/Internet Protocol), which is essentially a common language for interoperation of computer networks that might use a variety of local protocols.[341]

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[336] *Amendment of Part 0,1,2, & 95 of the Commission's Rules to Provide Interactive Video & Data Services*, Report & Order, GEN Docket No. 91-2, 7 FCC Rcd 1630 (1992).

[337] 47 C.F.R. § 95.805.

[338] *Amendment of Part 95 of the Commission's Rules to Allow Interactive Video & Data Service Licensees to Provide Service to Subscribers*, Notice of Proposed Rule Making, WT Docket No. 95-47, __ FCC Rcd __, FCC 95-158 (May 5, 1995), *summarized at* 60 Fed. Reg. 25193 (May 11, 1995).

[339] 47 U.S.C. § 309(j).

[340] *Amendment of Part 95 of the Commission's Rules to Modify Construction Requirements for Interactive Video and Data (IVDS) Licenses*, Notice of Proposed Rule Making, WT Docket No. 95-131, 10 FCC Rcd 8700 (1995).

[341] Jeffrey K. MacKie-Mason & Hal R. Varian, *Economic FAQs About the Internet*, Internet Address: http://gopher.econ.lsa.umich.edu/FAQs/FAQs.html (June 1995).

126. The portion of the Internet in the United States generally has three levels -- local area networks, regional (mid-level) networks, and backbones. Until recently, NSFnet was the primary backbone for this portion of the Internet, but on April 30, 1995, NSFnet ceased operation and traffic in the United States is now carried on several privately operated backbones. These backbones generally use fiber optic facilities and, by the summer of 1995, there were at least fourteen national and super-regional high-speed TCP/IP networks.[342] MCI, which assisted in operating the original NSFnet, is one of the largest carriers of Internet traffic in this country, but the market includes firms such as Sprint, Alternet, PSInet and UUNet.[343]

127. Currently, the main categories of Internet activities are: (1) electronic mail; (2) interactive "chats"; (3) information retrieval; (4) remote program execution; and (5) user groups.[344] As bandwidth increases, these networks may increasingly distribute more complex data types, such as voice and video, as well as more traditional data. The functionalities of these networks can be expected to become increasingly varied and to include home shopping and banking, video-on-demand, and video conferencing.[345] Currently, Internet users generally rely upon existing communications facilities to access and use the network, such as standard telephone lines, private lines, integrated services digital network ("ISDN") lines, wireless facilities, or coaxial cable. As a result, the Internet is not a separate local distribution network except for extremely high volume users who access the network via private lines. Cable access to the Internet currently is being tested,[346] and through the Digital Audio-Visual Council ("DAVIC") the cable industry is working to develop a standard for cable modem and Internet access technology.[347] Server software that will enable the delivery of live, real-time audio, and video over the Internet is becoming available.[348] Consumer and business demand for the commercial, academic, governmental, and entertainment offerings is likely to grow as

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[342] *Id.*

[343] *Id.*

[344] *See, e.g.*, John R. Levine & Carol Baroudi, *Internet for Dummies* 7-11 (1993); Mark Gibbs & Richard Smith, *Navigating the Internet* 1-5, 13-14 (1993).

[345] Price Waterhouse, *Technology Forecast: Entertainment, Media, and Communications* 235, 248 (1995).

[346] *See, e.g.*, Mark Berniker, *Microsoft Sees 'Broadcast PC' Evolving Soon*, Broadcasting & Cable, Sept. 8, 1995, at 60; Mark Berniker, *TCI's @Home Teams with Netscape for Internet Access*, Broadcasting & Cable, Oct. 2, 1995, at 56.

[347] *See, e.g., Interoperability, Planning for Next Year Dominates DAVIC Meetings in L.A.*, Comm. Daily, Sept. 1995, at 2; Toby Scot, *DAVIC Releases First Standards,* Broadcasting & Cable, Oct. 2, at 53-54.

[348] Richard Karpinski, *Coming: Web TV*, Interactive Age, July 31, 1995, at 1.

the networks connected to the Internet and their capabilities increase.[349] Being an open network, the Internet has the potential to affect the video marketplace, perhaps significantly. However, it appears too early to assess its impact.

III. MARKET STRUCTURE CONDITIONS AFFECTING COMPETITION

A. Horizontal Issues in Markets for the Delivery of Video Programming

128. In this section of the *1995 Report*, we examine several issues concerning rivalry in markets for the delivery of video programming. First, we discuss the market definition that we used in the *1994 Report*, and have used again this year. We also consider the extent of concentration among MVPDs in local markets, and the nature of competition among MVPDs. Finally, we document increasing consolidation nationally and regionally among cable MSOs (and other MVPDs) over the past year, and the potential effects of such increased consolidation on rivalry in local markets for the delivery of video programming.

1. Market Definition

129. To analyze rivalry among providers of video programming services, it is necessary to define the relevant product and geographic markets. In the *NOI*, we invited comment on our use last year of the 1992 Cable Act's definition of "multichannel video programming service" as a starting point for the definition of the relevant product.[350] Although few commenters directly addressed this issue, most commenters generally relied on the same definition of the relevant product market.[351] Examples of comments concerning the appropriate product definition include DIRECTV's approval of the Commission's inclusion of all MVPDs in the relevant product market,[352] and HBO's assertion that subscribers can create their own service comparable to cable by combining over-the-air broadcast service with service from a non-cable MVPD and "premium" programming obtained from a non-cable MVPD or a VCR.[353] Accordingly, we reaffirm here our determination to use definition of an MVPD in the 1992 Cable Act as a starting point, and have considered all reasonable substitutes for the video programming services generally offered by cable systems and other MVPDs.

130. We also sought comment in the *NOI* on the relevant geographic market -- the area in which buyers can obtain alternative sources of supply, or in which there are sellers

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[349] Price Waterhouse, *supra*, at 235.

[350] *1994 Report*, 9 FCC Rcd at 7468 ¶ 49.

[351] NCTA Comments at 5; Time Warner Comments at 5; HBO Comments at 1-2.

[352] DIRECTV Reply Comments at 5.

[353] HBO Comments at 21-22.

who act to restrain the prices charged to those buyers.[354] A buyer of multichannel video service may select only from among the firms distributing multichannel video programming in a particular area -- the subscriber cannot turn to other providers whose services are not available in an area. Accordingly, commenters generally agree that the relevant geographic market is the local franchise area,[355] and we continue to believe that the relevant geographic market in which MVPDs compete is essentially local in nature.

2. Concentration in Local Markets

131. A firm with market power can maintain prices above the level that would prevail if the market were competitive, and the exercise of market power tends to produce a wealth transfer from buyers to sellers.[356] Sellers with market power can lessen competition in such areas as product quality, innovation and service. Market power among buyers of a product, referred to as monopsony power, can depress the price of the product below competitive levels, thereby reducing output below the optimal level. When potential entrants are unlikely to be able to respond quickly to an exercise of market power, the degree of concentration among competitors, which is referred to as horizontal concentration, can have a significant effect on rivalry and market performance. Market concentration reflects the number of firms a market and their respective market shares, and is particularly relevant where, as here, a market is characterized by substantial barriers that delay competitive entry.[357] In general, as markets become increasingly concentrated, firms have increased opportunities to coordinate their conduct tacitly or overtly, limit competition, and increase their rates of return.[358]

132. Last year, we found that local markets for providing multichannel video programming were highly concentrated, and that most consumers could not choose the services of an MVPD other than the local cable operator.[359] Although providers of DBS and MMDS services have increased their subscribership since last year, as shown in Table 1 of

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[354] *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 359 (1963); *Common Carrier Services*, 95 F.C.C. 2d 554, 573 (1983), *rev'd on other grounds*, *AT&T v. FCC*, 978 F.2d 727 (D.C. Cir. 1992), *cert. denied*, 113 S. Ct. 3020 (1993).

[355] *See, e.g.*, Time Warner Comments at 13-15.

[356] United States Department of Justice & Federal Trade Commission, *Merger Guidelines*, ¶ 1.41, 4 Trade Reg. Rep. (CCH) ¶ 13,104, at 20,569-3 (1992) ("*Merger Guidelines*").

[357] *E.g. infra.* sec. IV.A.3; *1994 Report*, 9 FCC Rcd at 7623 App. H.

[358] *E.g.*, *Merger Guidelines* ¶ 2, 4 Trade Reg. Rep. (CCH) 13,104, at 20,573-6 to 20,573-8; *Revision of Rules and Policies for the Direct Broadcast Satellite Service*, IB Docket No. 95-168, __ FCC Rcd ____, FCC 95-443 (Oct. 30, 1995).

[359] *1994 Report*, 9 FCC Rcd at 7541 ¶ 201.

Appendix G, the combined national market share of non-cable MVPDs at the end of September 1995 was slightly less than nine percent. Thus, on average, we expect that most local markets as measured by current subscribership continue to remain highly concentrated. If we used total number of subscribers as a measure of market share, we could calculate the Herfindahl-Hirschman Index ("HHI") for the market, which is a standard measure of horizontal concentration in an industry that is calculated by summing the squares of the firms' percentage shares of the market.[360] The United States Department of Justice and the Federal Trade Commission generally regard a market with an HHI below 1000 as "unconcentrated," a market between 1000-1800 as "moderately concentrated," and a market above 1800 as "highly concentrated."[361] Using total numbers of subscribers as a measure of market share, the average HHI in local markets for video programming would be over 8650, or more than four times as high as the threshold at which a market may be considered "highly concentrated."

133. An alternative way to view MVPD concentration may be to assign equal market shares to competing MVPDs with similar capacities for serving subscribers. Such an approach is consistent with the approach taken by the United States Department of Justice and Federal Trade Commission.[362] Assigning equal market shares to firms that have similar abilities to serve new customers may be appropriate because, to the extent competing MVPDs have similar levels of capacity deployed in a market, they may have an equal ability to serve customers. Under such an approach, a local market served by five video distributors of roughly comparable capacity would have an HHI above 2000, and thus would be considered highly concentrated.[363] Only when a sixth MVPD is providing service in a particular local market would the HHI for that market fall below the highly concentrated level, to an HHI of 1673.[364] Because less concentrated markets are generally less susceptible to impaired market performance and are, therefore, more likely to benefit consumers, the Commission will continue its efforts to eliminate barriers that delay entry by competitive firms, although issues associated with such conentration are likely to remain a concern for at least several years.

3. Nature of Competition in Local Markets

134. The extent to which concentration in local markets for the delivery of video programming affects consumer welfare is affected by the degree to which the services of other MPVDs are interchangeable with the services of cable systems. While we continue to believe

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[360] *See, e.g., Merger Guidelines*, ¶ 1.5, 4 Trade Reg. Rep. (CCH) ¶ 13,104, at 20,573-5.

[361] *Id.* ¶ 1.51, 4 Trade Reg Rep. (CCH) ¶ 13,104, at 20,573-5 to 20,573-6.

[362] *Id.* ¶ 1.41, 4 Trade Reg. Rep. (CCH) ¶ 13,104, at 20,573-4 to 20,573-5.

[363] With five equal sized firms, each would have a market share of 20%, which when squared equals 400. The HHI would therefore equal 5 x 400, or 2000.

[364] With six comparable firms, each would have a market share of 16.6%, which when squared equals 277.7. The HHI would therefore equal 6 x 277.7, or 1666.

that the distribution of multichannel video programming is the relevant market in which cable operators compete, we recognize that MVPDs use different distribution technologies that can each be described by a unique set of attributes, which can be similar to, or significantly different from, the attributes of a typical cable system. For example, products within this market can differ from each other in terms of the number of channels and types of programming offered. Demand for the services of different MVPDs is a function of consumer preferences for the different attributes of the distribution systems.

135. The extent to which other firms within the multichannel video market provide pricing discipline for cable television, therefore, is dependent on the extent to which the offerings of these other firms differ from the services of cable systems. Cable systems are less able to raise prices above competitive levels, all other things being equal, if consumers are able and willing to choose instead the services offered by other firms. We believe current cable subscribers are more likely to switch to the services of other MVPDs in response to a price increase if those other MVPDs offer bundles of attributes comparable to the attributes offered by the cable operator.[365]

136. Concerns about concentration are also informed by an analysis of the incentives for other MVPDs to engage in product differentiation strategies, which can also affect the competitive interactions among firms within a given market. All other things being equal, firms that offer products with dissimilar attributes are less likely to compete with each other on the basis of price. To a certain extent, MVPDs can choose the attributes of the services they offer. Choosing dissimilar attributes may allow firms to decrease the amount of price competition in the industry.[366] This is especially true to the extent that the firms can commit to their choice of attributes, since this credibly signals their willingness to pursue this strategy.[367] For example, one MVPD may decide to specialize in the offering of sports programming. Such a strategy could differentiate its services from those offered by most cable systems, which typically provide a variety of programming, including some sports. By differentiating its services, the MVPD might reduce the extent of competition between its services and those offered by cable systems generally. To the extent that this firm signs long-term contracts with sports programmers, it can commit itself to pursue this differentiation strategy for a given period of time.

137. On the other hand, once firms have expended the fixed costs necessary to enter

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[365] *See, e.g.*, Jerry A. Hausman, Gregory Leonard & J. Douglas Zona, *A Proposed Method for Analyzing Competition Among Differentiated Products*, 60 Antitrust L.J. 889-900 (1992).

[366] *See, e.g.*, Avner Shaked & John Sutton, *Relaxing Price Competition through Product Differentiation*, 49 Rev. Econ. Stud. 1, 3-13 (1982).

[367] For a discussion of how actions by firms can be used to signal whether they are likely to compete aggressively or not, see Drew Fudenberg & Jean Tirole, *The Fat Cat Effect, the Puppy Dog Ploy and the Lean and Hungry Look*, 74 Am. Econ. Rev. 361 (1984).

the video distribution market, they might have an incentive to expand output in order to lower unit costs and to help recoup their fixed investment.[368] One way to do this might be to position their services as closer substitutes for those of cable systems and compete more strongly with those systems on price terms. To date, some firms, such as cable overbuilders and MMDS firms, appear to have pursued a strategy based on a certain degree of price competition with incumbent cable systems.[369] They appear to generally provide programming choices that are very similar to the ones provided by incumbent cable systems and try to draw customers away by offering lower prices. In contrast, it currently appears that DBS operators have tended to pursue more of a product differentiation strategy, with DBS operators focusing on their ability to offer digital programming that includes programming and operational features currently unavailable from most cable systems.[370]

138. We continue to believe that efforts to encourage competitive entry and reduce concentration will increase opportunities for rivalry and improve market performance. However, it is difficult to predict the extent to which local markets will be characterized over the long term by vigorous rivalry among multiple distributors, or whether additional MVPDs may remain essentially fringe competitors, with either relatively small market shares or services largely differentiated from those of cable systems.

4. Concentration of Cable Systems Nationally

139. In addition to our ongoing concern with concentration in local markets, the 1992 Cable Act was concerned with and places limits on the nationwide concentration of cable systems, given the potential effect of this increased national concentration on competition in the provision of multichannel video programming.[371] In the *1994 Report*, we

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[368] For a discussion of behavior by firms in the industries with fixed costs, see Jean Tirole, *The Theory of Industrial Organization* 305-60 (1988).

[369] *E.g., supra* secs. II.A.4, II.C.1.

[370] The different technological characteristics of, and constraints on, the delivery systems employed by various MVPDs may also affect the extent to which concentration in local markets affects consumer welfare. *E.g. supra.* secs. II.B.1 (DBS systems), II.B.2 (HSD packagers), II.C.1 (MMDS systems), II.D (LEC entry), II.E (SMATV systems).

[371] 1992 Cable Act, § 11(c), *amending,* Communications Act, § 613, 47 U.S.C. § 613. The *1994 Report* discusses the potential adverse and pro-competitive effects of increased national concentration in the cable industry. *See 1994 Report*, 9 FCC Rcd at 7518-21 ¶¶ 150-56. Pursuant to Section 11(c) of the 1992 Cable Act, the Commission promulgated horizontal ownership rules, which prohibit any entity from having an "attributable interest" in cable systems that reach more than thirty percent of all homes passed nationwide by cable, or thirty-five percent if the additional systems are "minority-controlled." *See Implementation of Sections 11 & 13 of the 1992 Cable Act (Horizontal & Vertical Ownership Limits),* Second

(continued...)

found that the four largest cable MSOs accounted for service to 47% of all cable subscribers, with TCI (24.75%), Time Warner (12.53%), Continental (5.08%), and Comcast (4.82%) comprising the four largest cable operators.[372] We also calculated an HHI of 898 for cable systems nationally based on transactions consummated at the time of the *1994 Report*, which means that a national market would have been considered "unconcentrated."[373]

140. One year later, we find that the four largest MSOs accounted for service to 55% of cable subscribers, with TCI (25.87%) Time Warner (16.21%), Continental (6.85%), and Comcast (5.66%) remaining the four largest MSOs.[374] Greater concentration among the largest MSOs contributed to an increase in an HHI to 1098,[375] which means that a national cable market would now be considered moderately concentrated.

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[371](...continued)
Report & Order, 8 FCC Rcd 8565 (1993) ("*Second Ownership Report & Order*"); 47 C.F.R. § 76.503. After a federal district court ruled that Section 11(c) of the 1992 Cable Act is unconstitutional, *Daniel Cablevision, Inc. v. United States*, 835 F. Supp. 1, 10 (D.D.C.), *appeal docketed and pending*, Civ. Act. No. 93-5290 (D.C. Cir. 1993), the Commission stayed enforcement of its horizontal ownership rules pending appellate review. In addition, the horizontal ownership rules currently are under reconsideration by the Commission. *Consumer Fed'n. of Am. (Petition for Reconsideration of Second Ownership Report & Order)*, MM Docket No. 92-264 (filed Dec. 15, 1993) ("*Consumer Fed'n Petition for Recon.*"); *Bell Atl. Co. (Petition for Ltd. Reconsideration of Second Ownership Report & Order)*, MM Docket No. 92-264 (filed Dec. 15, 1993) ("*Bell Atl. Petition for Recon.*") .

[372] *1994 Report*, 9 FCC Rcd at 7589 App. G, Tbl. 2. Those figures were generated using March 31, 1994 subscriber totals, Paul Kagan Assocs., *Top 100 Cable System Operators as of March 31, 1994*, Cable TV Investor, Jun. 30, 1994 (Insert), with the MSOs subscriber counts being revised pursuant to the Commission's attribution rules, *e.g.*, 47 C.F.R. § 76.501, to account for common interest, including all transactions that had been consummated as of August 31, 1994. As a result, the figures differ from those that would be obtained from generally distributed measurements of subscriber totals.

[373] *1994 Report*, 9 FCC Rcd at 7589 App. G, Tbl. 2.

[374] *Infra* Appendix G, Table 2. Like the 1994 figures, these figures were generated using subscriber totals from March 31 of the year, Paul Kagan Assocs., *Top 100 Cable System Operators as of March 31, 1995*, Cable TV Investor, Jun. 30, 1995 (Insert), with the MSOs subscriber counts being revised pursuant to the Commission's attribution rules, *e.g.*, 47 C.F.R. § 76.501, to account for common interest, including all transactions that had been consummated as of August 31 this year. As a result, the figures differ from those that would be obtained from generally distributed measurements of subscriber totals.

[375] *Infra* Appendix G, Table 2. This calculation is based on subscriber totals including transactions consummated before November 20, 1995.

141. A number of transactions have been announced since our report last year, including acquisitions by the two largest MSOs.[376] If all of those transactions are consummated, the top four companies' share of subscribers would increase to 61.3%, and the percentage of subscribers served by the ten largest MSOs would increase from 73.42% to 79.89%.[377] The announced transactions include: (1) TCI's pending purchase of cable systems from Viacom, which would add 1.16 million subscribers to its subscriber base;[378] (2) Time Warner's pending acquisition of Cablevision Industries Corporation ("CVI"), which serves 1.4 million subscribers;[379] (3) Comcast's announced transaction with Scripps Howard, which has attributable interests in systems serving over 750,000 subscribers;[380] and (4) a number of smaller announced transactions. If all of those transactions are consummated, an HHI calculated for cable systems nationally would increase from 1098 currently to 1355, which is well into the range in which a market would be considered moderately concentrated.

5. Regional Concentration of Cable Systems -- "Clustering"

142. Overall, it appears that the desire of cable MSOs to develop local "clusters," is a major factor underlying many of the cable industry transactions, including sales of systems and system-for-system exchanges between MSOs.[381] In its 1994 annual report to shareholders, Time Warner describes the clustering of its cable systems as the basis both for anticipated revenue growth from cable service and for entering the market for local telephone service.[382] One analyst estimates that twenty percent of the nation's cable subscribers will have changed hands in 1995, and that nearly all of these transactions are driven by MSOs' interest in clustering systems.[383]

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[376] *Infra* Appendix G, Table 5.

[377] *Infra* Appendix G, Table 3.

[378] Eben Shapiro, *Viacom Agrees to Spin Off, Then Sell Its Cable Systems*, Wall St. J., July 26, 1995, at A3.

[379] *Time Warner Crests Cable Deal-Making Wave, Buying Cablevision Industries*, Comm. Daily, Feb. 8, 1995, at 1.

[380] Comcast Corp., *Comcast Acquires 800,000 Cable Subscribers from E.W. Scripps* (News Release), Oct. 29, 1995.

[381] The system-for-system exchanges identified in this section include transactions in which one party also contributes cash as part of the transaction.

[382] Time Warner, Inc., *1994 Annual Report* 45 (1995).

[383] Paul Kagan Assocs., Inc., *MSOs Swapping Their Way To ADI Dominance*, Cable TV Investor, Sep. 18, 1995, at 4.

143. The number of clusters of systems serving at least 100,000 subscribers increased from 88 at year-end 1993 to 97 by year-end 1994.[384] These 97 clusters accounted for 34% of all cable subscribers. Time Warner had 33 of these clusters, TCI had 12, and Continental had 6. In addition to creating clusters from previously unaffiliated systems, the largest MSOs are increasing the size of their existing clusters. At the end of 1993, there were 6 clusters of systems serving a combined total of over 300,000 subscribers. By the end of 1994, however, the number of such clusters of over 300,000 subscribers had increased to 13, and over 6 million of the nation's subscribers were receiving service from one of those "mega" clusters.

144. In addition to a number of the smaller transactions,[385] two of the largest system sales announced since the *1994 Report* were apparently motivated, at least in part, by the desire to cluster systems:

- TCI's pending purchase of cable systems from Viacom and Chronicle Publishing would result in TCI controlling 1.3 of the 1.45 million cable subscribers in the San Francisco Bay area, and 900,000 of the 1 million subscribers in Seattle.[386]

- Time Warner's pending acquisition of Cablevision Industries and its acquisition of KBLCOM would result in Time Warner having clusters of over 1 million subscribers in New York City, 638,000 in central Florida, 512,000 in Tampa Bay, Florida and 249,000 subscribers in Houston.[387]

145. Cable MSOs have also sought to create clusters by trading systems. The largest system-for-system exchange since the *1994 Report* occurred on September 11, 1995, when TCI and Cox announced that they had agreed to exchange cable properties involving 600,000 subscribers.[388] Other significant system-for-system exchanges announced in the past year include Time Warner and Century trading systems that involved a total of 200,000 subscribers;[389] Time Warner and Jones Intercable exchanging a total of 182,000 subscribers on

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[384] *Id.* at 38-39.

[385] *Infra* Appendix G, Table 5.

[386] John M. Higgins, *New TCI Deal Worth A Bit Less To Viacom*, Multichannel News, July 31, 1995, at 3.

[387] *1995 Cable Financial Databook, supra*, at 38-39.

[388] *Mass Media*, Comm. Daily, Sep. 12, 1995, at 8.

[389] *Century Completes Time Warner Swap*, Multichannel News, Aug. 7, 1995, at 45.

one occasion,[390] and 141,000 in another instance;[391] TCI and Intermedia Partners exchanging systems that served a total of 155,000 subscribers;[392] TCI and Post-Newsweek Cable exchanging 102,500 subscribers;[393] and TCA and Time Warner swapping systems involving 58,000 subscribers.[394]

146. As we recognized last year, increased regional concentration could have both procompetitive and anticompetitive effects.[395] In its comments this year, Time Warner notes that the economies associated with clustering were an important factor in its decision to make multimillion dollar investments in facilities that will provide the next generation of telecommunications services.[396] Time Warner also disagrees with a number of concerns associated with clustering that we discussed last year. In particular, it argues that clustering does not tend to remove any competitive pressure that unaffiliated, adjacent cable systems exert on each other through threats of overbuilding because, according to Time Warner, adjacent cable systems do not exert competitive pressure on each other because adjacent systems cannot compete for each other's subscribers.[397] Similarly, Time Warner argues that clustering does not send entry-deterring signals to potential rivals, and notes that entry by DBS and LECs into local markets has taken place concurrently with its own substantial investment in its systems.[398]

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[390] *Mass Media*, Comm. Daily, Aug. 15, 1995, at 6.

[391] Jim McConville, *Cable's Summer of Major League Clustering*, Broadcasting & Cable, Oct. 2, 1995, at 46.

[392] Paul Kagan Associates, Inc., *Cable System Sales: Breakthroughs to Come*, Cable TV Investor, Mar. 24, 1995, at 5.

[393] *Mass Media*, Comm. Daily, Aug. 14, 1995, at 7.

[394] *Mass Media*, Comm. Daily, Aug. 30, 1995, at 10.

[395] *1994 Report*, 9 FCC Rcd at 7518-21 ¶¶ 150-56. We also note that Section 202 the telecommunications bill passed by the United States House of Representatives would enjoin the Commission from preventing the transfer of cable systems solely on the basis of geographic location. *See* H.R. 1555, 104th Cong., 1st Sess. § 202 (1995). The committee report accompanying the bill explains that the scale and scope economies associated with system clustering may improve existing cable service and enhance the cable industry's ability to provide local telephone service. *See* H.R. Rep. No. 204, 104th Cong., 1st Sess., pt. 1, at 107 (1995).

[396] Time Warner Comments at 11-12.

[397] *Id.* at 14.

[398] *Id.* at 15-16.

147. Finally, as mentioned above in the sections addressing competition to cable systems by MVPDs using various distribution technologies, there has been a significant increase in actual and proposed consolidation among non-cable MVPDs since last year.[399] In particular, the largest MMDS system operators have acquired a number of previously unaffiliated MMDS systems, and two of the largest MMDS systems have themselves become partly or wholly owned by LECs providing telephone services in the region.[400] The likely overall effect on market performance of these transactions among non-cable MVPDs is currently unclear. Such consolidation may make the non-cable MVPDs more effective competitors, in particular by combining LEC resources with the operations of other MVPDs. On the other hand, increased consolidation among non-cable MVPDs may tend to reduce the number of firms that ultimately offer multichannel video programming in most local markets which, as discussed above, may reduce the potential for sustained and vigorous price competition.

B. Vertical Integration in the Cable Industry

148. In this section of the *1995 Report*, we review the status of vertical integration in the cable industry, and update information provided in the *1994 Report*.[401] We also provide information on the Commission's enforcement and rulemaking activities relating to provisions of the 1992 Cable Act designed to address the potential anticompetitive effects of vertical integration and to foster competitive entry in the video programming supply and distribution markets -- the program access, program carriage and channel occupancy rules.[402]

1. Status of Vertical Integration in 1995

149. In the *1994 Report*, the Commission found that the percentage of programming services that were affiliated with a cable operator had grown from approximately 50% to 53% since 1990.[403] In addition, we found that most of the programming services that had been

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[399] *Supra* secs. II.B.1 (DBS), II.C.1 (MMDS), II.D (LECs).

[400] *Supra* sec. II.C.1.

[401] Vertical integration occurs where a cable system (a video programming service distributor) has an ownership interest in a video programming service supplier or vice versa.

[402] Those provisions of the 1992 Cable Act are codified at: Communications Act § 628(b)-(c), 47 U.S.C. §§ 548(b)-(c) (program access); Communications Act § 613(f)(1)(B), 47 U.S.C. § 533(f)(1)(B) (channel occupancy); and Communications Act § 616, 47 U.S.C. § 536 (program carriage). *See also* 47 C.F.R. §§ 548(b)-(c), 533(f)(1)(B), 536.

[403] *1994 Report*, 9 FCC Rcd at 7522 ¶ 161.

launched since 1990 were owned in part by one or more cable operators.[404] We further determined that vertically integrated programming services continued to be among the most widely viewed national services.[405]

150. Since the *1994 Report*, the total number of national programming services has increased from 106 to approximately 129.[406] Of those 129 services, 66, or approximately 51% of all national services existing today, are vertically integrated.[407] This represents a slight decrease in the level of vertical integration in the industry from last year's figure of 53%.[408]

151. Based on its analysis of recent data, NCTA states that little has changed with regard to cable MSO ownership or affiliation with programming networks since the *1994 Report*.[409] As NCTA points out, a number of cable networks that were launched in the past year have no affiliation with a cable MSO.[410] Five of the twelve national programming services that were launched since September 1994, or approximately 42%, are affiliated with a cable operator.[411] In addition, cable operators have thus far invested in only 18 of the 80 national programming services that have been announced but not launched since the *1994 Report*, or approximately 23% of such announced services.[412]

152. The ten largest MSOs in terms of subscribership have a stake in 65 of the 66 vertically-integrated services, or in 99% of all such services.[413] TCI, the largest MSO, holds

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[404] *1994 Report*, 9 FCC Rcd at 7524 ¶ 166. However, less than half of all newly announced programming services were owned in whole or in part by cable operators. *Id.*, n.450.

[405] *1994 Report*, 9 FCC Rcd at 7522 ¶ 162.

[406] *Id.* at 7522 ¶ 161, n.434; *infra* Appendix H, Tables 1-2.

[407] *Infra* Appendix H, Tables 1-2.

[408] The *1994 Report* indicated that the overall number of national programming services had grown from 70 national services in 1990 to 106 national services in 1994. *1994 Report*, 9 FCC Rcd at 7522 ¶ 161 n.434. The growth in national programming services from 1990 to 1994 was accompanied by a slightly greater increase in cable company investment in programming services. *Id.*

[409] NCTA Comments at 32.

[410] *Id.* at 33.

[411] *Infra* Appendix H, Tables 1-2.

[412] *Id.*, Tables 3-4.

[413] *Id.*, Table 5.

ownership interests in 38 national programming services, which amounts to approximately 30% of the available national programming services.[414] This represents an increase in TCI's level of vertical integration since last year, when we reported that TCI held interests in 22% of all available national programming services.[415] Time Warner, the nation's second largest MSO, holds interests in 18 national programming services, or approximately 14% of those available.[416] This represents a 1% decline from 1994.[417]

153. Since the *1994 Report*, the number of national programming services in which an MSO holds a 50% or greater interest has increased. Currently, 36 vertically-integrated national programming services are owned, in part, by an MSO holding a 50% or greater ownership interest.[418] Viacom holds a 50% or greater interest in 12 of those 36 services, but, as discussed above, has agreed to sell its cable systems to TCI.[419] This would significantly reduce the degree of such ownership interests by cable operators, as well as the overall level of vertical integration in the cable industry.[420] TCI/Liberty Media and Time Warner hold such interests in 10 and 5 of those 36 services, respectively.

154. Since 1994, there has been a decrease in the number of programming services in which multiple MSOs hold combined interests of greater than 50%. Currently, there are nine programming services that are each owned, in part, by several MSOs whose ownership interests, if combined, would comprise an interest of 50% or greater in that programmer.[421] There are eight programming services that are each partially owned by several MSOs whose ownership interests, if aggregated, would constitute a minority interest in that programmer.[422] In addition, there are approximately ten vertically-integrated programming services in which a

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[414] *Id.*

[415] *1994 Report*, 9 FCC Rcd at 7526 ¶ 168.

[416] *Infra* Appendix H, Table 5.

[417] *See 1994 Report*, 9 FCC Rcd at 7526 ¶ 168.

[418] *Infra* Appendix H, Table 1. In the *1994 Report*, it was reported that 24 of the 56 vertically integrated services existing at that time were owned, in part, by a single MSO holding a 50% or greater ownership interest. *1994 Report*, 9 FCC Rcd at 7527 ¶ 169.

[419] *See supra* sec. III.A.4.

[420] NCTA Comments at 33.

[421] *Infra* Appendix H, Table 1. Last year, it was reported that there were 19 national programming services that were each owned, in part, by several MSOs whose combined ownership interests comprised a 50% or greater interest in that programmer. *1994 Report*, 9 FCC Rcd at 7527 ¶ 170.

[422] *Infra* Appendix H, Table 1.

single MSO holds a minority ownership interest.[423]

155. Programming services affiliated with an MSO continue to be among the most popular programming services in the country. One exception is the non-vertically integrated ESPN, which remains the top service by subscribership,[424] and is the fifth most popular service based on prime time rating.[425] Of the top 25 programming services in terms of subscribership, 15 are owned in whole or in part by an MSO, and 10 by one of the four largest MSOs.[426] Two of those top 25 services, C-SPAN and C-SPAN II, while not owned in the usual sense by cable operators, were creations of the cable industry.[427] Of the top 15 services by prime time rating, 11 are vertically integrated, and 9 are owned, in part, by one or more of the four largest MSOs.[428]

156. In the last year, there has been little change in the relative rank of vertically-integrated programming services. Only two of last year's top 25 programming services by subscribership no longer appear on that list.[429] While one of those services, Comedy Central, is vertically integrated, the other service, EWTN: The Catholic Network, is not. However, the two services that replaced them, Home Shopping Network and The Learning Channel, are vertically integrated.[430] Only two services that previously were in the top 15 by prime time rating, MTV and Nickelodeon/Nick at Nite, no longer rank among the 15 highest rated networks in terms of prime time audience.[431] Both MTV and Nickelodeon/Nick at Nite are vertically integrated.[432] In addition, both The Learning Channel and E! Entertainment

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[423] *Id.*

[424] *Id.*, Table 6.

[425] *Id.*, Table 7.

[426] *Id.*, Table 6.

[427] *Id.* C-SPAN and C-SPAN II, non-profit cable networks, receive funding through system operators and other MVPDs that provide support on a per-subscriber basis. *1994 Report*, 9 FCC Rcd at 7528 ¶ 171. *See also id.* at 7599, Appendix G, Table 7 n.1.

[428] *Infra* Appendix H, Table 7.

[429] *Compare 1994 Report*, 9 FCC Rcd at 7599, Appendix G, Table 7 *with infra* Appendix H, Table 6.

[430] *Compare 1994 Report*, 9 FCC Rcd at 7599, Appendix G, Table 7 *with infra* Appendix H, Table 1.

[431] *Compare 1994 Report*, 9 FCC Rcd at 7600, Appendix G, Table 8 *with infra* Appendix H, Table 7.

[432] *Infra* Appendix H, Table 1.